Planning for Design and Implementation of
the Agency Management Information System

1. Background: During the last quarter of 1964 plans materialized to initiate a project that had as its final objective the implementation of an Agency Management Information System. The impetus for this project was generated by several related events: a renewed recognition that a new and improved management data processing system was needed to meet the increasing demands of the Agency,

25X1A

the appointment of [redacted] as the DD/S Special Assistant for ADP, the OCS decision to install third generation computer equipment, and the transfer of the Automatic Data Processing Division to OCS. On 11 December 1964, the Assistant Director, Computer Services submitted a paper, "Total Management Information System for CIA," which outlined the general plan for an Agency Management Information System, defined the Objectives, Scope, and Roles for such a project and estimated requirements as to personnel, hardware, costs, and space, and made projections of Tasks and Schedules.

This paper, with cover memorandum, was addressed to the Deputy Director (Support).

25X1A Early in January, 1965, [redacted] (DD/S Special Assistant) was assigned the task of undertaking this 25X1A project on behalf of the Support Directorate. [redacted] proceeded to organize the project into three major functional areas -- Human Resources, Materiel Resources, and Financial Resources -- and to staff the Human Resources effort with six (6) full time representatives from the Office of Personnel, Security, Training, Finance and Medical Services. In February, 1965, OCS appointed 25X1A [redacted] as the OCS advisor to the [redacted] group 25X1A (now identified as the Support Information Requirements Group). In April, 1965, the Materiel Resources Group was formed with four (4) representatives from the Offices of Logistics and Finance.

2. Current Status: The total project has been divided into three major functional areas and six major phases. They are as follows:

a. Major Functional Areas

1. Human Resources (Personnel)

2. Materiel Resources (Things)

3. Financial Resources (Money)

b. Major Phases (applicable to each of the above)

1. Problem Definition and Analysis

2. Consolidation and Evaluation of sub-systems

3. Systems Design

4. Coordination and approval

5. Computer Programming

6. System implementation

Each major functional area was divided into functional processes and eventually each of these functional processes will be sub-divided. At this point the Human Resources Area has been divided into five functional processes: Recruitment, Pre-employment processing, EOD processing, Employee activity, and Termination. These processes have been sub-divided in order to organize the effort in manageable parts.

The first nine functional areas for Materiel Resources are: requisitioning, stock replenishment,

receiving, shipping, introduction of new items, property disposals, physical inventory, pricing computation, and preparation of catalogues. The functional areas have not yet been identified for the Financial Resources area.

The Human Resources Group has been working full time since January, the Materiel Resources Group since 29 April, and the Financial Resources Group has not yet been formed. It is planned for formation in August.

3. Responsibilities: This project is a joint effort between the DD/S Support Information Requirements Group (SIRG) and OCS. Responsibilities for the major phases are as follows:

a. Problem Definition and Analysis (DD/S -SIRG)

b. Consolidation and Evaluation (DD/S - SIRG and OCS)

c. System Design (DD/S - SIRG and OCS)

d. Coordination and Approval (DD/S - SIRG and OCS)

e. Computer Programming (OCS)

f. System Implementation (DD/S - SIRG and OCS)

4. Estimated Target Dates:

	Human Resources		Materiel Resources		Financial Resources		Additional Sub-Systems	
	Begin	Complete	Begin	Complete	Begin	Complete	Begin	Complete
a. Problem Definition & Analysis	Jan. 1965	Aug. 1965	April 1965	Oct. 1965	July 1965	Mar. 1966	July 1965	Sept. 1966
b. Consolidation & Evaluation	June 1965	Dec. 1965	July 1965	Mar. 1966	Oct. 1965	June 1966	Jan. 1966	Mar. 1967
c. Systems Design	Sept. 1965	Dec. 1966	Oct. 1965	Mar. 1967	Jan. 1966	Mar. 1967	July 1966	Dec. 1968
d. Coordination	Jan. 1966	Mar. 1967	Apr. 1966	Mar. 1967	Oct. 1966	June 1967	Jan. 1967	Mar. 1969
e. Computer Programming	Mar. 1966	Mar. 1968	July 1966	June 1968	July 1966	Sept. 1968	Jan. 1967	Dec. 1969
f. Implementation	Jan. 1967	1969	Apr. 1967	1969	Apr. 1967	1969	Apr. 1967	1970

The above estimated target dates are very tentative at this point and are dependent upon many variable factors. The schedule for the Problem Definition and Analysis phase is dependent upon such factors as availability of manpower, identification of sub-systems, the scope of changes which are taking place daily in the present systems that must be taken into account, etc. The schedule for the Consolidation and Evaluation phase is completely dependent upon the success

of the first phase. As the project progresses, and as more experience is gained in identifying the scope of activity to be included within the Management Information System, revised estimates will be made.

5. Manpower Requirements: Based upon progress made to date and the target dates as planned and summarized above, it is now necessary to plan for the staffing of this effort in OCS.

The table below is a summary of the estimates of manpower effort required by each component for the phases of this project. (The estimates do not include the component Project Managers).

	DD/S (Man-Months)	OCS (Man-Months)
a. Problem Definition & Analysis, Consolidation & Evaluation	190	60
b. Systems Design & Coordination	147	150
c. Computer Programming		200
d. Implementation	84	50
Sub Total	421	460
Additional Sub Systems Analysis/Design	96	80
Programming		100
GRAND TOTAL	517	640
Man Years	(43)	(53)

In estimating the computer programming effort, which is 300 man-months and is the greatest share of the total effort, the following assumptions have been made:

a. The Basic system will require 200,000 machine instructions.

b. Writing in COBOL will require 1 COBOL statement for each 5 machine instructions.

c. Ten COBOL statements can be written per man-day.

d. The basic system will require 40,000 COBOL statements.

e. The additional sub-systems will require 20,000 COBOL statements.

The following is an estimate of the time-table for assigning manpower to this project in OCS.

Needed	Analysts	Programmers	Man-Months
July 1965 - Dec. 1969	2		108
Sept. 1965 - Mar. 1967	3		54
Jan. 1966 - Sept. 1968	4		132
Mar. 1966 - Dec. 1968		4	132
July 1966 - Dec. 1968		4	120
July 1966 - Mar. 1970		2	90
TOTAL	9	10	636

6. Staffing: This effort cannot be staffed totally from within OCS. There are several possible alternatives available:

a. Contract for the entire project.

b. Contract for part and provide for the remainder within OCS.

c. Provide some personnel from within OCS, and obtain additional personnel from the Support Directorate on a temporary basis for the duration of the project.

d. Provide some personnel from within OCS, contract for additional personnel, and supplement these with personnel from the Support Directorate.

Alternative d seems to be the most attractive approach and has several advantages.

a. OCS personnel who have particular subject knowledge can be assigned to plan and supervise the areas of their prime concern.

b. Personnel from the Support Directorate can be assigned to take advantage of their subject area knowledge.

c. The Support Directorate personnel can provide continuity to their "home office" for liaison between OCS, the system, and the personnel in the DD/S who must use the system when it becomes operational.

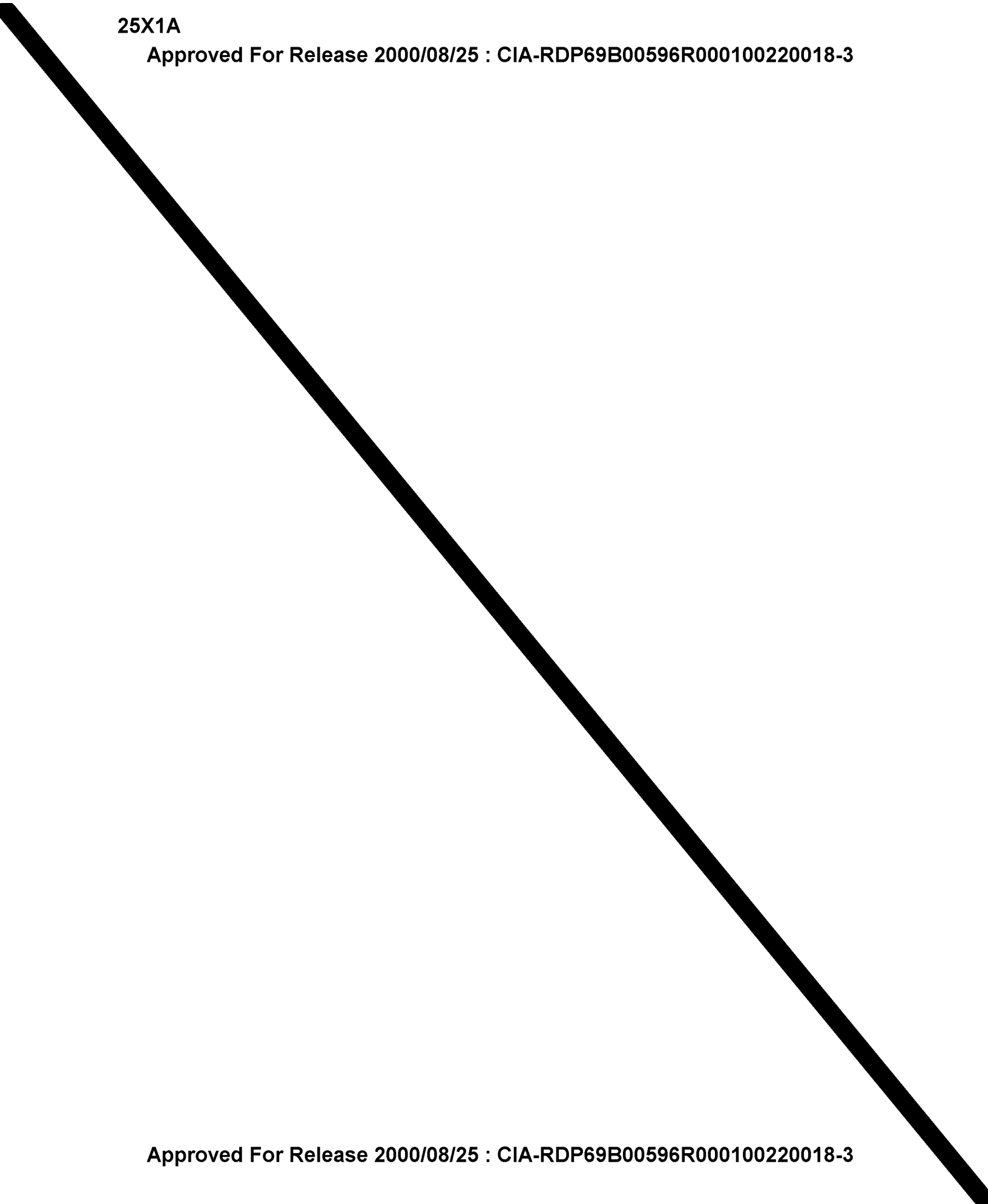
d. Contract personnel can be obtained who have specific technical knowledge not now available in the Agency, such as integrated systems for Management Information, Direct Access-Remote Device Systems, etc.

e. After the completion of the project, the contract personnel can easily be terminated.

Assuming alternative d to be the plan for providing personnel for this project, the staffing should be arranged approximately as follows:

	Analysts	Programmers
Staff provided by OCS/MSB	5	4
Contractors for MIS Project	4	4
Contractors to supplement and support the Management Support Branch activities*		5
Staff personnel from the Support Directorate assigned to the project		2
	9	15

* These 5 programmers would be used to support regular day-to-day programming requirements of the Management Support Branch, maintaining existing systems and responding to special requests against existing files.



8. The four contractor systems analysts to be acquired should have a high degree of skill and experience in:

a. The Management Sciences and in particular the design and development of management data processing/information systems.

b. Large volume direct access/remote device computer systems.

c. A governmental or multi-corporate environment.

The contractor computer programmers acquired should have a high degree of skill and experience in:

a. Programming large scale computer systems and in particular those involving direct access devices and remote stations.

b. Programming business data processing systems.

c. Programming the IBM System 360.

d. Programming in COBOL, FORTRAN, AUTOCODER, etc.

9. The plans and estimates made here are based upon accumulated information to date. It is too early to make more firm estimates on systems design and programming because this entirely depends upon the definition of requirements and the scope of the eventual system which is

defined by the Support Information Requirements Group. In general, it now appears that the system envisioned and the systems design and programming effort is far greater and larger in scope than the aggregate of the systems now being processed by OCS for the DD/S. The schedule for commencing systems design is also completely dependent upon completion of the problem definition and evaluation phases of the project by the Support Information Requirements Group. Revised estimates and schedules will be made each six months.